Outline for February 19, 2016

Reading: §16, 17 in text

Assignments due: Homework 3, due February 22

1. Administrative matters
   a. Presentations for February 22
      i. Francesco Capponi, “Securing the Software-Defined Network Control Layer”; questioner, Calvin Li
      ii. Chaitrali Joshi, “Addressing the Challenge of IP Spoofing”; questioner, Sandeep Rasoori
   b. Presentations for February 24
      i. Mark Crompton, “A Diagnosis-Based Intrusion Detection Approach”; questioner, Yuan-Yu Chen
      ii. Apoorva Rangaraju, “Reinforcement Learning Algorithms for Adaptive Cyber Defense Against Heartbleed”; questioner, Francesco Capponi

2. Execution-based information flow mechanisms
   a. Fenton’s Data Mark Machine
   b. Variable classes
   c. Exception handling

3. Confinement problem
   a. What is it?
   b. Total isolation
   c. Covert channels, side channels
   d. Rule of Transitive Confinement
   e. Isolation with virtual machines
   f. Sandboxes